

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 1, 2010 has been entered.

Response to Amendment

This Action is in response to applicant's amendment/arguments filed on June 1, 2010. **Claims 1, 3-8, 10-15** are still currently pending in the present application.

Response to Arguments

Applicant's arguments with respect to claims 1, 3-8, and 10-15 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point

out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3-6, 8, 10-13, and 15 are rejected under 35 USC 103(a) as being unpatentable over **Kallio (US PGPUB 2002/0147008 A1)** in view of **Ludwig (US Patent 6,256,498 B1)** in view of **Hamilton et al. (US PGPUB 2002/0177431 A1, hereinafter Hamilton)** and further in view of **Savunen (US Patent 7,411,922 B1)**.

Consider **claim 1 (and similarly applied to claims 8 and 13)**. Kallio discloses a wireless Local Area Network (WLAN) (paragraph 28), comprising:

an access point for communicating with a plurality of mobile stations (figure 1, paragraphs 10, 29, read as the WMC is arranged to serve as a WLAN access point); and

an interworking function within the WLAN, coupled between the access point and a selected GSM network, via an interface gate, the interworking function of the WLAN enabling communications between the selected GSM and the WLAN wherein the WLAN appears as another GSM to the selected GSM (paragraph 28, read as a Mobile Transaction Server (MTS))

220 and a hotspot LAN 230 that are connected to the GSM network 100, via a A-interface gate (AGW) 310).

Kallio substantially discloses the claimed invention except he fails to teach Public Land Mobile Network (PLMN) and an inter-PLMN backbone using a Gp interface.

However, Ludwig discloses a Public Land Mobile Network (PLMN) and an inter-PLMN backbone (column 5 lines 57-60, column 6 lines 23-29, read as the inter-PLMN backbone network is the IP network interconnecting GSN support nodes and intra-PLMN backbone networks in different public land mobile networks using a Gp interface).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Ludwig into the invention of Kallio in order to integrate WWW services into a digital cellular communication network and also to provide the functionality of the Gn interface plus security functionality required for inter-PLMN communication (column 10 lines 27-37).

In addition, Kallio and Ludwig fail to explicitly teach wherein the interworking function enables communications with a Serving General Packet Radio Service Support Node (SGSN) of the selected PLMN.

However, Hamilton teaches wherein the interworking function enables communications with a Serving General Packet Radio Service Support Node (SGSN) of the selected PLMN (paragraph 40, read as the border gateway extends the GPRS backbone network that are physically located in different PLMNs. One can observe from figure 1 that the border gateway is located between a base station subsystem (i.e. access point) and the PLMN).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Hamilton into the invention of Kallio and Ludwig in order to more optimally provide a bearer service for packet switched data (paragraph 3).

Kallio, Ludwig, and Hamilton substantially disclose the claimed invention but fail to explicitly teach that the Gp interface being coupled between the interworking function and the inter-PLMN backbone.

However, Savunen teaches that the Gp interface being coupled between the interworking function and the inter-PLMN backbone (column 3 lines 44-48, column 10 lines 34-65, Savunen teaches that the TETRA PLMN allows a relatively simple interworking function between separate PLMN networks (i.e. inter-PLMN backbone). The Gp interface is used for interworking between the GGSNs in separate TETRA PLMNs so that packet data can be tunneled from one TETRA network to another, where the Gp interface is also coupled to a Border Gateway BG).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Savunen into the invention of Kallio, Ludwig, and Hamilton in order to improve the inter-connectability of a packet data access network to other networks.

Consider **claim 3 and as applied to claim 2**. Kallio and Ludwig disclose wherein the interworking function performs the functions of a logical Serving General Packet Radio Service (GPRS) Support Node (SGSN) (Ludwig; column 6 lines 7-29).

Consider **claim 4 and as applied to claim 3**. Kallio and Ludwig disclose wherein the interworking function is viewed by the selected PLMN as an SGSN in another UMTS/GPRS PLMN (Ludwig; column 6 lines 7-29).

Consider **claim 5 and as applied to claim 1**. Kallio and Ludwig disclose wherein the selected PLMN includes Session Management/GPRS mobility management (SM/GMM) procedures, which are reused in the WLAN by the use of an adaptation layer in a mobile dual-protocol stack and in the IWF to WLAN interface to mimic the functionality of a Radio Resource Control (RRC) protocol sub-layer (Kallio; paragraph 30, Ludwig; column 6 lines 6-16).

Consider **claim 6 and as applied to claim 1**. Kallio and Ludwig disclose wherein the interworking function utilizes a GPRS tunneling protocol between a GGSN and the interworking function for downlink traffic coming from the GGSN to reduce UMTS traffic, and provides a common Internet access to all users for all other traffic to reduce the traffic between the interworking function and the GGSN (Kallio; paragraph 23, Ludwig; column 5 lines 40-47).

Consider **claim 10 and as applied to claim 8**. Kallio and Ludwig disclose wherein the providing step comprises providing an interworking function that mimics the functions of a Serving General Packet Radio Service (GPRS) Support Node (SGSN) (Ludwig; column 6 lines 7-29).

Consider **claim 11 and as applied to claim 8**. Kallio and Ludwig disclose further comprising utilizing a GPRS tunneling protocol between a GGSN and the interworking function for downlink traffic coming from the GGSN to reduce traffic on the selected PLMN (Kallio; paragraph 23, Ludwig; column 5 lines 40-47).

Consider **claim 12 and as applied to claim 8**. Kallio and Ludwig disclose further comprising an adaptation layer in a mobile dual-protocol stack in the interworking to WLAN interface to mimic the functionality of a Radio Resource Control (RRC) protocol sub-layer, whereby the session management/GPRS mobility management (SM/GMM) procedures are reused in the WLAN (Kallio; paragraph 30, Ludwig; column 6 lines 6-16).

Consider **claim 15 and as applied to claim 13**. Kallio and Ludwig disclose further comprising the step of providing an interworking function that mimics the functions of a Serving GPRS Support Node (SGSN) such that the WLAN appears as another PLMN to the selected PLMN (Kallio; paragraph 35, Ludwig; column 6 lines 7-29).

Claims 7, 14 are rejected under 35 USC 103(a) as being unpatentable over **Kallio (US PG PUB 2002/0147008 A1)** in view of **Ludwig (US Patent 6,256,498 B1)** in view of **Hamilton et al. (US PG PUB 2002/0177431 A1, hereinafter Hamilton)** in view of **Savunen (US Patent 7,411,922 B1)** and further in view of **Rune (US Patent 6,212,390 B1)**.

Consider **claims 7 and 14 and as applied to claim 1 and 13, respectively**. Kallio, Ludwig, Hamilton, and Savunen disclose the claimed invention except they fail to explicitly disclose wherein the selected PLMN comprises a Universal Mobile Telecommunications System (UMTS) network.

However, Rune discloses wherein the selected PLMN comprises a Universal Mobile Telecommunications System (UMTS) network (column 1 lines 55-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Rune into the invention of Kallio,

Ludwig, Hamilton, and Savunen in order to support all the current wired and wireless technology offer and have the ability to support new applications that are common to both, or unique to UMTS (column 1 lines 46-54).

Conclusion

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Brandt whose telephone number is (571) 270-1098.

The examiner can normally be reached on 7:30a.m. to 5p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Christopher M Brandt/

Examiner, Art Unit 2617

June 5, 2010